Applicant : Koji Nishikawa
Serial No. : 10/588,638
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Attorney's Docket No.: 19415-0012US1 / PCT-05R-
205/US

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A waveform equalizer comprising:

a calculation circuit ~~that permits free setting of a boost factor by which a gain, in a predetermined frequency range, for an input signal to the waveform equalizer is adjusted and that adjusts the gain for the input signal by varying the boost factor~~; and

an all-pass filter that is connected to a stage preceding or following the calculation circuit, and that has a first conductance amplifier and a second conductance amplifier, ~~and that adjusts and thereby corrects a group delay characteristic of the input signal by varying a conductance of at least one of the first and second conductance amplifiers~~

wherein the all-pass filter is arranged to make a conductance of the second conductance amplifier variable and, by varying the conductance of the second conductance amplifier, adjusts and thereby corrects a group delay characteristic of the input signal while keeping a group delay of an input signal to the waveform equalizer in a direct-current range constant.

2. (Currently amended) The waveform equalizer of claim 1, wherein the all-pass filter further comprises: ~~has~~

a differentiator that is connected between input and output circuits of the first conductance amplifier and that includes a first capacitor and

a second capacitor that is connected between an input side of the first conductance amplifier and an output side of the second conductance amplifier.

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3. (Currently amended) The waveform equalizer of claim 2 <u>arranged so that</u> ~~, wherein~~

> an input voltage to the all-pass filter is fed to one input terminal of the first conductance amplifier,

> a voltage applied to an output terminal of the first conductance amplifier is fed to one input terminal of the second conductance amplifier,

> a voltage applied to an output terminal of the second conductance amplifier, which voltage corresponds to an output voltage of the all-pass filter, is fed to another input terminal of the first conductance amplifier and to another input terminal of the second conductance amplifier, and

> the input voltage to the all-pass filter and the voltage applied to the output terminal of the first conductance amplifier have phases inverted relative to each other.

4. (Canceled)

5. (Currently Amended) The waveform equalizer of claim <u>1</u> [[2]], wherein the all-pass filter makes the conductance of [[the]] <u>a</u> first conductance amplifier variable, and, by varying the conductance of the first conductance amplifier, varies a frequency range in which the group delay characteristic of the input signal is corrected.

6. (Currently Amended) The waveform equalizer of claim 1, wherein the calculation circuit ~~is built~~ <u>arranged</u> as an equi-ripple filter.

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7. (Currently Amended) An information reproducing apparatus comprising:

a detector <u>arranged to detect</u> ~~that detects~~ information recorded on a recording medium and ~~that~~ then <u>to convert</u> ~~converts~~ the detected information into an electrical signal;

[[an]] <u>a</u> waveform equalizer <u>according to claim 1 and arranged to receive</u> ~~that receives as an input signal thereto~~ the electrical signal <u>as the input signal</u>; and

a processing circuit <u>arranged to process</u> ~~that processes~~ an output from the waveform equalizer<u>.</u>

~~wherein~~

~~the waveform equalizer is the waveform equalizer of one of claim 1, and~~

~~the information reproducing apparatus further comprises a controller that sets the boost factor and that sets whichever of the conductances of the first and second conductance amplifiers is made variable.~~

8. (New) The waveform equalizer of claim 1 wherein the calculation circuit is arranged to adjust a gain for the input signal by varying an increasing factor for freely setting the gain in a predetermined frequency range for the input signal.

9. (New) The waveform equalizer of claim 1 wherein the all-pass filter is arranged to maintain a conductance of the first conductance amplifier substantially constant.